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LEE, CHUN KUAN	
ART UNIT	**PAPER NUMBER**
2181	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/688,273	MYLLY ET AL.	
	Examiner	Art Unit	
	Chun-Kuan (Mike) Lee	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19,32,34,36 and 37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19,32,34,36 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

FRITZ FLEMING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100
12/4/2006

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/10/2006 have been fully considered but they are not persuasive. Currently, claims 20-31, 33 and 35 are withdrawn and claims 1-19, 32, 34, 36 and 37 are pending for examination.

2. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that the combined teaching of Oh-Yang and Khouli failed to teach the claimed invention because there is no indication that the LAN controller in Khouli has at least one dormant mode and a normal mode, and therefore, there is no mode setting in the LAN controller that is controlled by a command transmitted from the computer, as stated on page 11, 4th paragraph. Applicant's arguments have fully been considered, but are not found to be persuasive.

Please note that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Further more, applicant's arguments appear to be directed towards the claimed limitation "... card comprises at least one dormant mode and a normal mode, in which method a command for setting the normal mode is transmitted to the card to change the mode of the card from said at least one dormant mode to

the normal mode..." and as stated in the preceding office action, this claimed limitation is taught by Oh-Yang rather than Khouli; more specifically, Oh-Yang teaches the card comprises at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (Oh-Yang, col. 3, ll. 54-59), in which method a command for setting the normal mode is transmitted to the card to change the mode of the card from said at least one dormant mode to the normal mode (Oh-Yang, col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), and after receiving the command, the card shifts to normal operation (Oh-Yang, col. 2, ll. 26-30).

3. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that the claimed limitation "...wherein the card generates an interrupt request related to the change in the mode of the card, to be transmitted via the interface to the terminal at the stage when the card shifts to the normal mode..." is not taught by the combined teaching of Oh-Yang and Khouli because Khouli's SCI signal is generated by the LAN controller to wake up the computer, where as, the interrupt request is not for the purpose of waking up the terminal, because the mode shift is not related to the terminal but to the card, as stated on page 11, 5th paragraph. Applicant's arguments have fully been considered, but are not found to be persuasive.

Khouli teaches the peripheral device (e.g. LAN controller) is shifted to an active mode (e.g. wake up mode) from a non-active mode (e.g. stand by mode), and as the result of this shift in mode, a SCI signal is generated by the peripheral and transferred the computer (i.e. terminal) (Khouli, Fig. 2 and col. 6, ll. 1-14),

therefore, Khouli's teaching does meet the claimed limitations such that the peripheral (i.e. card) generates the SCI signal (i.e. interrupt request) relating to the peripheral shifting to the active mode from the non-active mode (i.e. change in the mode of the card), wherein the SCI signal (i.e. interrupt request) is transmitted to the computer (i.e. terminal) for processing. Therefore, Khouli does teach the mode shifting relating to the peripheral (i.e. card), and the SCI signal is to inform the computer that the peripheral has shifted from the non-active mode to the active mode.

4. In responding to applicant's argument regarding independent claim 1 rejected under 35 U.S.C. 103(a) that the claimed limitation "... wherein the interrupt request, received from the card and relating to the mode change is processed in the terminal...", is not taught by the combined teaching of Oh-Yang and Khouli, because this step is not related to any process in the computer of Khouli, as in the present invention, the interrupt signal indicates that that the card is ready (the card shifts to the normal mode), and also the term "is processed" in the claim has different meaning than the term "wake up" in Khouli, as stated on page 11, last paragraph to page 12, 1st paragraph. Applicant's arguments have fully been considered, but are not found to be persuasive.

Please note that the features upon which applicant relies (i.e., features/functions associated with the term "is processed") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As Khouli teaches the peripheral device (e.g. LAN controller) is shifted to an active mode (e.g. wake up mode) from a non-active mode (e.g. standby mode), and as the result of the mode shift, a SCI signal is generated by the peripheral and transferred the computer (i.e. terminal) (Khouli, Fig. 2 and col. 6, ll. 1-14); therefore, the SCI signal (i.e. interrupt request) is to indicate to the computer (i.e. terminal) that the peripheral (i.e. card) shifts to the active mode (i.e. normal mode), and as the computer processes the received SCI signal, the computer wakes up (i.e. the term "is processed" is associated with the computer "processing" the received SCI signal).

5. As applicant applies similar arguments for independent claim 1 towards independent claims 7, 13, 16, 17 and 19, the examiner also applies the similar responses for independent claim 1 toward independent claims 7, 13, 16, 17 and 19.

6. As per claims 2-6, 8-12, 14-15 and 18, dependent claims 2-6, 8-12, 14-15 and 18 are unpatentable at least due to direct or indirect dependency on the rejected independent claims 1, 7, 13, 16, 17 and 19.

7. In responding to all the arguments present by the applicant, the examiner will maintain his position and rejection of record in detail below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-2, 7-8, 11, 13-17, 19, 32, 34 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh-Yang et al. (US Patent 6,351,820) in view of Khouli et al. (US Patent 6,308,278).

9. As per claim 1, Oh-Yang teaches a method for changing a mode of a card (Fig. 1, ref. 10) connected to an interface of a terminal (Fig. 1, ref. 80),

which card comprises at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (col. 3, ll. 54-59),

in which method a command for setting the normal mode is transmitted to the card to change the mode of the card from said at least one dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3),

after receiving the command, the card shifts to normal operation (col. 2, ll. 26-30).

Oh-Yang does not expressly teach the method comprising:

wherein the card generates an interrupt request related to the change in the mode of the card, to be transmitted via the interface to the terminal at the stage when the card shifts to the normal mode,

wherein the interrupt request, received from the card and relating to the mode change, is processed in the terminal.

Khouli teaches a system and a method comprising:

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted to an active mode (e.g. wake up mode) from a non-active mode (e.g. stand by mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device to wake up the computer (Fig. 5 and col. 6, ll. 1-14).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's SCI signal into Oh-Yang's card. The resulting combination of the references teaches the method further comprising:

when the card shifts from the sleep state to the normal state, the card generates the SCI signal, associated to the change in the state of operation, to be transferred to the computer; and

when the computer receives and processes the SCI interrupt, the computer will then wake up.

Therefore, it would have been obvious to combine Khouli with Oh-Yang for the benefit of enabling a robust power management system, wherein the whole computer system can reduce power consumption (Khouli, col. 2, ll. 1-11 and col. 2, ll. 28-35).

10. As per claim 2, Oh-Yang and Khouli teaches all the limitations of claim 1 as discussed above, where Khouli further teaches the method comprising wherein the interface is provided with one or more signal lines, wherein one of said signal lines of the interface is used for transferring said interrupt request to the terminal (Khouli, Fig. 2, ref. 236, 240).

11. As per claim 7, Oh-Yang teaches a system comprising a terminal (Fig. 1, ref. 80) and a card (Fig. 1, ref. 10) which can be connected to an interface of the terminal (connection between ref. 18 and ref. 80 on Fig. 1) and

which card comprises at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (col. 3, ll. 54-59), and

which system comprises means for transferring a command to set the normal mode to the card, for changing the mode of the card from said at least one dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), and

after receiving the command, the card shifts to normal operation (col. 2, ll. 26-30).

Oh-Yang does not expressly teach the system comprising:

means for generating an interrupt request relating to the change of the mode and for transferring it via the interface from the card to the terminal, and

that the terminal comprises an interrupt processor for processing the interrupt request which has come from the card and which relates to the mode change.

Khouli teaches a system and a method comprising:

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted from a non-active mode (e.g. stand by mode) to an active mode (e.g. wake up mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device (Fig. 2, ref. 214), and in response to the received SCI signal by the power management device, the computer wakes up (Fig. 5 and col. 6, ll. 1-25).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's SCI signaling and the power management device into Oh-Yang's system. The resulting combination of the references teaches the system further comprising:

when the card shifts from the sleep state to the normal state, the card generates the SCI signal, associated to the change in the state of operation, to be transferred to the power management device; and

when the power management device receives and processes the SCI interrupt, the computer will then wake up.

Therefore, it would have been obvious to combine Khouli with Oh-Yang for reason stated above in claim 1.

12. Claim 8 repeats the limitations of claims 2 and is therefore rejected accordingly.

13. As per claim 11, Oh-Yang and Khouli teach all the limitation of claim 8 as discussed above, where both further teach the system comprising wherein the interface comprising at least one card connection for connecting the card to the terminal (Oh-Yang, connection between ref. 18 and ref. 80 on Fig. 1), and

said at least one card connection comprising at least the following lines:

one data line (Khouli, Fig. 3, ref. 310, 320) for the transfer of data between the terminal and the card,

one command line for the transmission of commands from the terminal to the card and for the transmission of responses from the card to the terminal (Oh-Yang, col. 5, l. 66 to col. 6, l. 3 and Khouli, Fig. 3, ref. 236), as the command is transferred from the computer to the PC card, there must be the command line utilized for the transferring of the commands, and

one clock line (Khouli, Fig. 3, ref. 315, 325) for the transmission of a clock signal from the terminal to the card.

14. As per claims 13, 16 and 36, Oh-Yang teaches a method for use by a (memory) card (Fig. 1, ref. 10) which is arranged to be connected to an interface (connection between ref. 18 and ref. 80 on Fig. 1) of a terminal (Fig. 1, ref. 80) and

which card comprises at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (col. 3, ll. 54-59) and means for processing a command to set the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3),

said command coming via the interface of the terminal, for changing the mode of the card from said at least one dormant mode to the normal mode (col. 5, l. 66 to col. 6, l. 3), and

after receiving the command, the card shifts to normal operation (col. 2, ll. 26-30).

Oh-Yang does not expressly teach the card comprising means for generating an interrupt request relating to the change in the mode of the card.

Khouli teaches a system and a method comprising:

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted from a non-active mode (e.g. stand by mode) to an active mode (e.g. wake up mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device (Fig. 2, ref. 214), and in response to the received SCI signal by the power management device, the computer wakes up (Fig. 5 and col. 6, ll. 1-25).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's SCI signaling into Oh-Yang's card. The resulting combination of the references teaches the card further comprising:

when the card shifts from the sleep state to the normal state, the card generates the SCI signal, associated to the change in the state of operation.

Therefore, it would have been obvious to combine Khouli with Oh-Yang for reason stated above in claim 1.

15. As per claims 14-15, Oh-Yang and Khouli teach all the limitations of claim 13 as discussed above, where both further teach the card comprising:

means for transferring the interrupt request via the interface of the terminal to the terminal (Khouli, Fig. 2, ref. 236); and

wherein the interface is provided with one or more signal lines (Khouli, Fig. 2, ref. 236),

wherein the card comprises a bus connection block (Oh-Yang, Fig. 1, ref. 18) for transferring said interrupt request to the terminal on one of said signal lines of the interface (Khouli, col. 4, ll. 7-9 and col. 6, ll. 12-14).

16. As per claim 17, Oh-Yang teaches a terminal provided with an interface (connection between ref. 18 and ref. 80 on Fig. 1) for connecting a card (Fig. 1, ref. 10) to the terminal (Fig. 1, ref. 80),

which card comprises at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (col. 3, ll. 54-59), and

which terminal comprises an interface for transferring a command to set the card in the normal mode, for changing the mode of the card from said at least one dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), and

after receiving the command, the card shifts to normal operation (col. 2, ll. 26-30).

Oh-Yang does not expressly teach the terminal comprising:

wherein the terminal comprises means for receiving an interrupt request, relating to the mode change and generated by the card, via the interface from the card to the terminal, and

that the terminal comprises an interrupt processor for processing the interrupt request coming from the card and relating to the mode change.

Khouli teaches a system and a method comprising:

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted from a non-active mode (e.g. stand by mode) to an active mode (e.g. wake up mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device (Fig. 2, ref. 214), and in response to the received SCI signal by the power management device, the computer wakes up (Fig. 5 and col. 6, ll. 1-25).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's SCI signaling and the power management device into Oh-Yang's system. The resulting combination of the references teaches the system further comprising:

the terminal comprising the power management device;

when the card shifts from the sleep state to the normal state, the card generates the SCI signal, associated to the change in the state of operation, to be transferred to the power management device; and

when the power management device receives and processes the SCI interrupt, the computer will then wake up.

Therefore, it would have been obvious to combine Khouli with Oh-Yang for reason stated above in claim 1.

17. As per claim 19, Oh-Yang teaches a mobile station (e.g. notebook personal computer, col.1, ll. 48-52) provided with an interface (connection between ref. 18 and ref. 80 on Fig. 1) for connecting a card (Fig. 1, ref. 10) to the mobile station (Fig. 1, ref. 80),

which card comprises at least one dormant mode (e.g. sleep state) and a normal mode (e.g. normal state) (col. 3, ll. 54-59), and

which mobile station comprises an interface for transferring a command to set the card in the normal mode, for changing the mode of the card from said at least one dormant mode to the normal mode (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), and

after receiving the command, the card shifts to normal operation (col. 2, ll. 26-30).

Oh-Yang does not expressly teach the mobile station comprising:

wherein the mobile station comprises means for receiving an interrupt request, relating to the mode change and generated by the card, via the interface from the card to the mobile station, and

that the mobile station comprises an interrupt processor for processing the interrupt request coming from the card and relating to the mode change.

Khouli teaches a system and a method comprising:

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted from a non-active mode (e.g. standby mode) to an active mode (e.g. wake up mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device (Fig. 2, ref. 214), and in response to the received SCI signal by the power management device, the computer wakes up (Fig. 5 and col. 6, ll. 1-25).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's SCI signaling and the power management device into Oh-Yang 's system. The resulting combination of the references teaches the system further comprising:

the mobile station comprising the power management device;

when the card shifts from the sleep state to the normal state, the card generates the SCI signal, associated to the change in the state of operation, to be transferred to the power management device; and

when the power management device receives and processes the SCI interrupt, the computer will then wake up.

Therefore, it would have been obvious to combine Khouli with Oh-Yang for reason stated above in claim 1.

18. As per claims 32 and 34, Oh-Yang teaches a mode shifting method for a mobile terminal (e.g. notebook personal computer; col. 1, ll. 48-52) having a card interface (Fig. 1, ref. 80) for interfacing a card (Fig. 1, ref. 10) thereto for use after a command has been sent from the terminal to the card to return from a dormant mode (e.g. sleep state) to a normal mode (e.g. normal state) (col. 2, ll. 26-30 and col. 5, l. 66 to col. 6, l. 3), comprising:

the terminal starting to use the card via said interface in a normal way after said card has shifted to the normal mode (col. 2, ll. 26-30).

Oh-Yang does not expressly teach the mode comprising

wherein the terminal receiving a signal from the card informing the terminal directly in response to said command that the card has shifted to the normal mode, and

wherein the terminal with a processor starting to use the card via said interface in a normal way in response to said card informing the terminal that the card has shifted to the normal mode.

Khouli teaches a system and a method comprising:

a host processor (Fig. 2, ref. 204);

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted from a non-active mode (e.g. a standby mode) to an active mode (e.g. wake up mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device (Fig. 2, ref. 214), and in response to the received SCI signal

by the power management device, the computer wakes up (Fig. 5 and col. 6, ll. 1-25).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's host processor, SCI signaling and the power management device into Oh-Yang 's system. The resulting combination of the references teaches the system further comprising:

the terminal including the host processor;

when the card shifts from the sleep state to the normal state, the card generates the SCI signal, associated to the change in the state of operation, to be transferred to the terminal's power management device; and

when the power management device receives and processes the SCI interrupt, the computer will then wake up and start to use the card in the normal way.

Therefore, it would have been obvious to combine Khouli with Oh-Yang for reason stated above in claim 1.

19. As per claim 37, Oh-Yang teaches a card (Fig. 1, ref. 10) for interfacing to a mobile terminal (e.g. notebook personal computer; col. 1, ll. 48-52) via a card interface in said terminal (connection between ref. 18 and ref. 80 on Fig. 1), comprising:

a control device (Fig. 1, ref. 12), responsive to a command received over a connection from said terminal to shift from a dormant mode (e.g. sleep state) to a normal mode (e.g. normal state) (col. 4, ll. 27-34 and col. 5, l. 66 to col. 6, l. 3),

for storing said command in a buffer (Fig. 3, ref. 16) for interpreting said command as a command to shift to said normal mode from said dormant mode (col. 3, ll. 25-30),

for setting said card to said normal mode (col. 4, ll. 27-34);

Oh-Yang does not expressly teach the card comprising wherein the control device sending an interrupt via said connection to said terminal indicative of said shift.

Khouli teaches a system and a method comprising:

a plurality of peripheral devices including a local are network (LAN) controller (Fig. 2, ref. 237);

when the LAN controller is shifted from a non-active mode (e.g. standby mode) to an active mode (e.g. wake up mode), a wake control signal, such as a system control interrupt (SCI) signal, is generated and transferred to the power management device (Fig. 2, ref. 214), and in response to the received SCI signal by the power management device, the computer wakes up (Fig. 5 and col. 6, ll. 1-25).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Khouli's SCI signaling into Oh-Yang 's control device. The resulting combination of the references teaches the system further comprising:

the control device sending the SCI signal, associated to the change in the state of operation, to the mobile terminal when the card shifts from the sleep state to the normal state.

Therefore, it would have been obvious to combine Khouli with Oh-Yang for reason stated above in claim 1.

20. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh-Yang et al. (US Patent 6,351,820) and Khouli et al. (US Patent 6,308,278), and further in view of Robinson et al. (US Patent 5,303,352).

Oh-Yang and Khouli teach all the limitations of claims 2 and 8 as discussed above.

Oh-Yang and Khouli does not expressly teach the method and the system comprising:

wherein a state of the signal line used for the transfer of said interrupt request is set in a first logical state after the command to set the normal mode has been received in the card, and

that the state of the signal line used for the transfer of said interrupt request is set in a second logical state after the normal mode is in use in the card.

Robinson teaches a system and a method comprising a bus within a terminal interconnecting a bus master card and a control circuit, wherein the bus has more than one state and said state changes when the bus master card receives and implement a signal send by the terminal (col. 2, ll. 63-65 and col. 5, ll. 18-31).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Robinson's multi-state signal line into Oh-Yang and Khouli's interconnection system and method.

Therefore, it would have been obvious to combine Robinson with Oh-Yang and Khouli for the benefit of enabling the PC card to properly gain control of the bus for data transferring.

21. Claims 4, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh-Yang et al. (US Patent 6,351,820) and Khouli et al. (US Patent 6,308,278), and further in view of Kihara et al. (US Patent 6,212,097).

Oh-Yang and Khouli teach all the limitations of claims 2, 8 and 17 as discussed above, where both further teach the system and the method comprising:

wherein the interface is provided with one or more signal lines, that at least one of said signal lines is a data line (Khouli, Fig. 3, ref. 310, 320); and

wherein the terminal comprises a coupling block for transferring the interrupt request from to said interrupt processor (Oh-Yang, Fig. 1, ref. 80), wherein the coupling block is the interface on the computer side to be coupled to the interface on the PC card (Fig. 1, ref. 18).

Oh-Yang and Khouli does not teach the method and the system comprising wherein at least one of said signal lines is a data line, and that said interrupt request is transmitted on said data line.

Kihara teaches a system and method comprising a pluralities of signal lines connected to the card, wherein one of said signal lines is a data line and that both interrupt request and data can be send over said data line (Fig. 3; col. 7, ll. 55-67 and col. 8, ll. 1-10).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Kihara's serial transfer of both interrupt request and data over the single line into Oh-Yang and Khouli's interconnecting system and method.

Therefore, it would have been obvious to combine Kihara with Oh-Yang and Khouli for the benefit of increasing the capability of the signal line, thus reducing the number of signal lines needed for a plurality of different signals send between the card and the terminal, for example, other than sending interrupt request and data, said serial communication data line can also include command signals (Kihara, col. 8, ll. 2-3).

22. Claims 5, 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh-Yang et al. (US Patent 6,351,820) and Khouli et al. (US Patent 6,308,278), and further in view of Lindskog et al. (US Pub.: 2002/0132603).

Oh-Yang and Khouli teach all the limitations of claims 1 and 7 as discussed above.

Oh-Yang and Khouli does not teach the method and the system comprising:

wherein after receiving said command to set the normal mode, an acknowledgement about the reception of the command is transmitted from the card to the terminal; and

wherein said terminal used is a wireless terminal provided with mobile station functions.

Lindskog teaches a system and a method comprising:

a wireless network interface card (NIC) coupled to a PC forming a mobile terminal (Fig. 2 and [0003]-[0004]); and

the NIC receiving a request from the PC to transit from a dormant state (i.e. D3) to an active state (i.e. D0) ([0079]); and

an acknowledgement is transferred to the PC in reponse to the request by the PC to transit from a dormant state (i.e. D3) to an active state (i.e. D0) (claim 17 on page 6).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Lindskog's mobile terminal and acknowledgement into Oh-Yang and Khouli's interconnecting system and method. The resulting combination of the references teaches the system and the method further comprising:

the card's the acknowledgement associated with the terminal's request to shift to normal state is transferred is transferred to the terminal; and

wherein the card coupled the terminal to form the wireless mobile terminal.

Therefore, it would have been obvious to combine Lindskog with Oh-Yang and Khouli for the benefit of providing a power saving concept for the PC in a

wireless local area network (WLAN) thus improving the battery lifetime of the PC (Lindskog, [0084]).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz M. Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.K.L.
12/14/2006

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